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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,483	05/17/2005	Johan Hendrik Klootwijk	NL02 1172 US	9370
24738	7590	03/07/2007		
PHILIPS ELECTRONICS NORTH AMERICA CORPORATION INTELLECTUAL PROPERTY & STANDARDS 1109 MCKAY DRIVE, M/S-41SJ SAN JOSE, CA 95131			EXAMINER KEBEDE, BROOK	
			ART UNIT 2823	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/07/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/535,483

Applicant(s)

KLOOTWIJK ET AL.

Examiner

Brook Kebede

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 is/are allowed.
- 6) ☒ Claim(s) 14-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/17/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Response to Amendment*

2. The preliminary amendment filed under 37 CFR 1.53(b) on May 17, 2005 is acknowledged and the amendment have been placed in the file.

### *Specification*

3. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.
4. The disclosure is objected to because of the following informalities: The headings of each section of the specification as set forth in 37 CFR 1.77(b) and 37 CFR 1.77(c) is required. "The specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading." See 37 CFR 1.77 (c).

### *Claim Rejections - 35 USC § 112*

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 14-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 14 recites the limitation “A method of manufacturing a radiation-emitting semiconductor device in which, in a semiconductor body, a vertical bipolar transistor is formed with a collector region, a base region and an emitter region which are each provided with a connection region, characterized in that the semiconductor body is formed as a thin layer of a semiconductive material that is separated from a temporary substrate by means of an electrically insulating layer, and the vertical bipolar transistor is formed in the semiconductor body, after which the substrate is attached onto a side of the semiconductor body opposite the electrically insulating layer, whereafter the temporary substrate is removed” in lines 1-9.

As claimed in claim 14, the instant application recites process claim in the preamble. However, the body of the claim recites the structure. Since there is no positive recitation in the body of the claim that indication of the actual process has been performed to manufacture the device, it is not clear whether the “process” or the “structure” is being claimed. Since it is not clear whether the “process” or the “structure” is being claimed, the scope of the instant application claimed invention couldn't be determined.

Therefore, the claim is indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 15-21 are also rejected as being dependent of the rejected independent base claim.

Applicants' cooperation is requested in reviewing the claims structure to ensure proper claim construction and to correct any subsequently discovered instances of claim language noncompliance. See *Morton International Inc.*, 28USPQ2d 1190, 1195 (CAFC, 1993).

***Allowable Subject Matter***

7. Claims 1-13 are allowed over prior art of record.

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8. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record neither anticipates nor renders obvious the claimed subject matter of the instant application as a whole either taken alone or in combination, in particular, prior art of record does not teach “base region and the collector region forms a pn junction, and, during operation, at a reverse voltage across the pn junction, or at a sufficiently high collector current, avalanche multiplication of charge carriers occurs, causing radiation to be generated in the collector region, characterized in that the collector region has a thickness such that transmission of the generated radiation occurs, and the collector region borders on a free surface of the semiconductor body,” as recited in claim 1.

Claims 2-13 are also allowed as being dependent of the allowed independent base claim.

9. Claim 14 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

10. Claims 15-21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure Tihanyi (US 4,355,320), Arai (US 6,252,286) and Tani et al. (US 2002/0047175) also disclose similar inventive subject matter. However, the prior art does not teach the aforementioned allowed claimed subject matter of claim 1.

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*Correspondence*

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brook Kebede whose telephone number is (571) 272-1862. The examiner can normally be reached on 8-5 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S. Smith can be reached on (571) 272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Brook Kebede*

Brook Kebede  
Primary Examiner  
Art Unit 2823

BK  
March 5, 2007